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EXAMINER	
SPOONER, LAMONT M	
ART UNIT	**PAPER NUMBER**
2654	2

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/585,320	DECARY, MICHEL	
	Examiner	Art Unit	
	Lamont M Spooner	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 June 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kucera.et al. (US Patent No. 4,864,501 Sep. 5, 1989).

As per **claims 1, 6, 7 and 37**, Kucera et al. discloses a natural language information extraction system for deriving information from a textual representation of a sentence, the sentence having a plurality of words, said system comprising:

an input for receiving data elements indicative of the textual representation of the sentence (C.1.lines 62, 63, Fig. 1 item 4);

a) a processing unit coupled to said input (Fig. 1 item 2), said processing unit being operative for processing the textual representation of the sentence to derive an information record (C.2.lines 9, 10) on the basis of a set of information extraction rules (C.2.lines 19-24), the information record being

indicative of a semantic representation of at least part of the sentence (C.2.lines 6-8-the gender is interpreted as a semantic representation);

b) an output for releasing the information record (Fig. 1 item 9).

As per **claim 2**, Kucera et al. discloses all of the limitations of claim 1, upon which claim 2 depends. Kucera et al. further discloses said processing unit comprises:

i. a morphological analyser for assigning to each word in the sentence a most likely morphological tag (C.7.lines 40-43).

ii. a syntactic processor coupled to the morphological analyser (Fig. 1 items 10, 10a and 10b), said syntactic processor being operative for generating a parse tree group including a plurality of parse trees (C.10.lines 54-58-each Sen-Node structure is a parse tree), each parse tree including a word of the sentence, at least one parse tree including at least two words of the sentence (C.11.lines 3, 4), said at least one parse tree including a dependency data element describing a syntactic relationship between the at least two words of the sentence (C.11.lines 38-40);

iii. an information extraction unit (C.10.lines 60-63, Fig. 7 item 124) for processing the plurality of parse trees to generate an information record on a basis of the set of information extraction rules (C.11.lines 60-64-the record is the error based upon the rules generated from the syntactic components evolved from the plurality of parse trees).

As per **claim 3**, Kucera et al. discloses all of the limitations of claim 2, upon which claim 3 depends. Kucera et al. further discloses:

each information extraction rule in said set of information extraction rules includes a data element indicative of a parse tree pattern (C.11.lines 1-11-the indicative patterns corresponding to each rule are NP, VG), said information extraction unit being operative to process the plurality of parse trees to extract a certain parse tree of said parse tree group, the certain parse tree matching the parse tree pattern (C.11.lines 1-11, 35-40-the certain NP, VG parse tree that match the patterns of are extracted).

As per **claim 4**, Kucera et al. discloses all of the limitations of claim 2, upon which claim 4 depends. Kucera et al. further discloses said morphological analyser is operative for:

a) processing the textual representation of the sentence (C.12.lines 5-7) to assign a respective set of morphological tags to each word in the plurality of words (C.12.lines 10-14);

b) assigning to each word an ambiguity class at least in part on the basis of the respective set of morphological tags (C.15.lines 25, 26, 60, 61, C.16.lines 22-24, C.17.lines 1-3, 47-49-the ambiguity classes/codes are assigned to each word on the basis of the respective set of morphological tags);

c) identifying a most likely morphological tag (C.2.lines 19, 20) to be associated to each word on the basis of a contextual rule (C.23.line 19-21-a contextual rule, C.15.lines 20-22), the contextual rule being associated to the respective ambiguity class assigned at step b) (C.32.lines 10-14).

As per **claim 5**, Kucera et al. discloses all of the limitations of claim 2, upon which claim 5 depends. Kucera et al. further discloses the syntactic processor is operative for:

i. generating a parse tree for each word in the sentence and adding each generated parse tree to a parse tree group (C.2.lines 19-28-each tag associated with the word in the sentence is the parse tree, C.10.lines 63-65-the structure includes the parse group);

ii. generating a new parse tree on the basis of binary dependency rules (C.11.lines 10-14-the predication structure is interpreted as the binary dependency) applied to a given parse tree in the parse tree group (C.11.lines 1-10-complex phrases being any given parse tree), the new parse tree resulting from a combination of the given parse tree and another parse tree from the parse tree group (C.11.lines 1-10);

iii. adding the new parse tree to the parse tree group (C.10.lines 63-66-the built higher structure of the parse includes the new parse tree C.11.lines 29-40, 52-56).

As per **claims 8, 15, and 16**, Kucera et al. discloses an apparatus for assigning a morphological tag to a given word in a sentence, the sentence including a set of words, said apparatus comprising:

a) an input for receiving a textual representation of the sentence (Fig. 1 items 2 and 4).

b) a processing unit coupled to said input, said processing unit (Fig. 1 items 2 and 4) being operative for:

i. processing the textual representation of the sentence (C.12.lines 5-7) to assign a respective set of morphological tags to each word in the set of words including the given word (C.12.lines 10-14);

ii. assigning to the given word an ambiguity class at least in part on the basis of a set of morphological tags associated to the given word (C.15.lines 25, 26, 60, 61, C.16.lines 22-24, C.17.lines 1-3, 47-49-the ambiguity classes/codes are assigned to each word-which includes the given word-on the basis of the respective set of morphological tags assigned to the given word);

iii. identifying a most likely morphological tag (C.2.lines 19, 20-"...each word..." includes the given word) to be associated to the given word on the basis of a contextual rule (C.23.line 19-21-a contextual rule, C.15.lines 20-22), the contextual rule being associated to the ambiguity class assigned at step ii (C.32.lines 10-14);

c) an output for releasing a signal indicative of the most likely morphological tag associated to the given word (Fig. 1 item 9).

As per **claim 9**, Kucera et al. discloses all of the limitations of claim 8, upon which claim 9 depends. Kucera et al. further discloses:

an ambiguity class is associated to a collection of words (C.6.lines 53-67-"...other classes may be defined..." indicating the current and additional ambiguity classes for the "words").

3. Claims 17-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Weise (US Patent No. 6,275,791 filed Feb. 26, 1999).

As per **claims 17, 23 and 24**, Weise discloses an apparatus for parsing a textual representation of a sentence to derive a parse tree group including a plurality of parse trees, the sentence including a plurality of words, the apparatus comprising:

a) an input for receiving data elements indicative of the textual representation of the sentence (C.1.lines 12-15);

b) a processing unit (Fig.1 item 21) for processing the data elements indicative of the sentence to generate a parse tree group (C.1.lines 12-15), said processing unit being operative for:

i. generating a parse tree for each word in the sentence and adding each generated parse tree to the parse tree group (C.7.lines 59, 60-the leaf node(s) associated to the word is the parse tree, Fig 3 items 322, 302, 320 and 304-have been grouped);

ii. generating a new parse tree (C.7.lines 65-67) on the basis of binary dependency rules (C.8.lines 8-15, 21-23, -the combination of two "certain types of nodes" and dependent agreement/dependency of the two phrases which are represented as parse trees) applied to a given parse tree in the parse tree group, the new parse tree resulting from a combination of the given parse tree and another parse tree from the parse tree group (C.8.lines 26-29);

iii. adding the new parse tree to the parse tree group (C.8.lines 35-37);

c) an output for releasing a signal indicative of the parse tree group (Fig. 1 item 47).

As per **claim 18**, Weise discloses all of the limitations of claim 17, upon which claim 18 depends. Weise further discloses:

each parse tree in the parse tree group includes a root node, the root node being associated to a word in the sentence (Fig. 3 items 302, 304, 306, 308, 310, 312).

As per **claim 19**, Weise discloses all of the limitations of claim 18, upon which claim 19 depends. Weise further discloses:

a) extracting a given parse tree fro the parse tree group, the given parse tree having a root node associated to a given word (Fig. 2 item 206 b);

b) processing a second parse tree (Fig. 2 item 206 a), the second parse tree having a root node (Fig. 3 item 302) associated to a word that is a precursor to the given word (Fig. 2 item 206 a- is a precursor to the parse tree from Fig. 3 item 304 "did-VP1") to derive a dependency data element (C.8.lines 26-28-the link and "VP=NP + VP" represent the dependency data element) resulting from a combination of the given parse tree and the second parse tree (Fig.2 item 206 p, C.8.lines 26-29);

c) combining the given parse tree (Fig 2. item 206 b) and the second parse tree (Fig. 2 item 206 a) at least in part on a basis of the dependency data element (C.8.lines 26-29) to generate the new parse tree (Fig. 2. item 206 p).

As per **claim 20**, Weise discloses all of the limitations of claim 19, upon which claim 20 depends. Weise further discloses:

the given parse tree covers a first consecutive words in the sentence (Fig. 2 item (Fig. 2 item 206 s), the second parse tree covering a second range of

consecutive words in the sentence, the second range of consecutive words being the immediate precursor (Fig. 2 item 206 p) of the first range of consecutive words in the sentence.

As per **claim 21**, Weise discloses all of the limitations of claim 18, upon which claim 21 depends. Weise further discloses said apparatus is further operative for:

a) extracting a given parse tree from the parse tree group, the given parse tree having a root node associated to a given word (Fig. 2 item 206 c);

b) processing a second parse tree, the second parse tree having a root node associated to a word that is a successor to the given word (Fig. 2 item 206 d) to derive a dependency data element (C.8.lines 26-28-the link and "VP=NP + VP" represent the dependency data element) resulting from a combination of the given parse tree and the second parse tree (Fig.2 item 206 206 q, C.8.lines 26-29);

c) combining the given parse tree (Fig. 2 item 206 c) and the second parse tree (Fig. 2 item 206 d) at least in part on the basis of the dependency data element (C.8.lines 26-29) to generate a new parse tree, the new parse tree forming the new parse tree (Fig. 2 item 206q).

As per **claim 22**, Weise discloses all of the limitations of claim 17, upon which claim 22 depends. Weise further discloses:

a) searching the parse tree group for a parse tree that matches the new parse tree (C.11.lines 11-13, 15-17, Fig. 4 item 412-the promoted node is the newly created tree);

b) adding the new parse tree to the parse tree group if no matching parse tree is found at step a) (Fig.4 items 414, 420)

4. Claim 25 is rejected under 35 U.S.C. 102(b) as being anticipated by van Zuijlen (US Patent No. 5,060,155 Oct. 22, 1991).

As per **claim 25**, van Zuijlen discloses an method for creating lexical frames for a parse tree group being derived from a sentence including a plurality of words, said method comprising:

a) receiving a parse tree group including a plurality of parse trees (Fig. 1a) , at least some parse trees including at least two words (Fig. 1b)and a data element indicative of the syntactic dependencies (C.8.lines 47-50, Fig. 9-the links and "[2:1-1], [5:1-1,0]" –data indicative of the syntactic dependencies between at least two words) between the at least two words;

b) processing the parse tree group to generate a plurality of lexical frames (C.16.lines 17-24, 40-60-the lexical nodes in combination with the list of dependencies make up the lexical frame in table 1) each lexical frame being associated to a respective word in the sentence (C.16.Table 1-"governor"), a certain lexical frame being associated to a certain word in the sentence and comprising a list of words of the sentence other than the certain word (C.16.Table 1 line "dependent" the list comprises words that are not the governing word"), each word in the list of words being associated to a dependency data element indicative of the syntactic relationship of each word in the list of words with the certain word (C.16.Table 1-Reference types);

c) releasing the plurality of lexical frames (C.16.lines 60-65).

van Zuijlen does not disclose the apparatus that embodies the method, however it inherent that an apparatus embody the method and system for the implementation and in order to output the results therewith.

5. Claim 26, 27 and 29-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Roberts (US Patent No. 6,601,055 filed Aug. 2, 1999).

As per **claim 26, 35, and 36**, Roberts discloses an apparatus for assigning semantic types to a noun phrase, the noun phrase including a set of words, said apparatus comprising:

a) an input (C.4.lines 43, 44) for receiving a data element indicative of a noun phrase (C.7.lines 37-39);

b) a processing unit (C.5.lines 54, 55) operative for:

i. assigning to each word in the noun phrase a semantic type on the basis of entries in a semantics dictionary (C.5.line 39) to derive a sequence of semantic typed words (C.5.line 41), the semantics dictionary including a plurality of entries (C.5.lines 34, 35), each entry being indicative of a word associated to at least one semantic type (C.5.lines 33-39);

ii. processing the sequence of semantic typed words (C.5.lines 30, 31) on the basis of a set of semantic rules (C.42.lines 8-30-each "if" statement indicates a semantic rule) to derive a semantic type associated to the noun phrase, the set of semantic rules describing how to attach a semantic type to a given noun phrase (C.42.lines 8-30-detail how to attach the semantic type to the phrase, Fig. 43- semantic types including noun phrases).

c) an output for releasing a signal indicative of the semantic type associated to the noun phrase (C.4.lines 44, 45).

As per **claim 27**, Roberts discloses all of the limitations of claim 26, upon which claim 27 depends. Roberts further discloses:

the set of semantic rules includes at least one rule based on the presence of a semantic type associated to a word in the noun phrase (C.42.lines 54-57).

As per **claim 29**, Roberts discloses all of the limitations of claim 26, upon which claim 29 depends. Roberts further discloses:

the set of semantic rules includes at least one rule based on the presence of a specific words in the noun phrase (C.42.lines 54-57).

As per **claim 30**, Roberts discloses all of the limitations of claim 26, upon which claim 30 depends. Roberts further discloses:

said noun phrase is a first noun phrase and the semantic type of the noun phrase is a first semantic type (C.37.lines 32, 33), said processing unit being further operative for:

a) processing a second noun phrase to derive a second semantic type associated to the second noun phrase (C.37.lines 32, 33-each word-the individual word being the noun phrase and having a semantic type).

b) combining the first noun phrase (Fig. 43 "breast") with the second noun phrase (Fig. 43 "cancer") derive a compound noun phrase (Fig. 43 "breast cancer") on the basis of joining rules (C.36, lines 60-67-the joining rules are interpreted as depend on the word/group relation);

c) assigning a third semantic type to the compound noun phrase (Fig. 43 RF_FAMILY_HISTORY_BREAST_CANCER-is the third semantic type, breast having a first semantic type, and cancer having a second semantic type, and the joining thereof producing the third semantic type);

d) releasing at the output a signal indicative of the compound noun phrase associated with the third semantic type (C.4.lines 44, 45).

As per **claim 31**, Roberts discloses all of the limitations of claim 30, Roberts further discloses:

said joining rules are based on either one of the first semantic type and the second semantic type (C.36.lines 63, 64).

As per **claim 32**, Roberts discloses all of the limitations of claim 30, upon which claim 32 depends. Roberts further discloses:

said joining rules are based on the semantic types of words in either one of the first noun phrase and the second noun phrase (C.36.lines 63, 64, Fig. 43 "breast cancer").

As per **claim 33**, Roberts discloses all of the limitations of claim 30, upon which claim 33 depends. Roberts further discloses:

said joining rules are based on specific words in either one of the first noun phrase and the second noun phrase (C.36.lines 63, 64, C.42.lines 52-55).

As per **claim 34**, Roberts discloses all of the limitations of claim 30, upon which claim 34 depends. Roberts further discloses:

said processing unit is further operative for processing the compound noun phrase on the basis of the occurrence of incompatible semantic types within the compound noun phrase (C.35.lines 45-47).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kucera et al. in view of Carus et al. (US Patent No. 5,794,177 Aug. 11, 1998).

Kucera et al. and Carus et al. are analogous art in that they are both involve morphological analysis of language.

As per **claim 10**, Kucera et al. discloses all of the limitations of claim 8, upon which claim 10 depends. Kucera et al. does not disclose:

the contextual rule is indicative of a data structure associating a certain precursor context and a certain successor context in which a word occurs to a data element selected from the set consisting of a morphological tag, an ambiguity class, and a word.

However, as it is well known in the art, Carus et al. teaches using several contextual rules (C.17.lines 15-40 list several contextual rules including tags, ambiguous classes, and words/tokens) indicative of the contextual data structure

containing a precursor and successor context of a word (C.17.lines 13-14). Therefore, at the time of the invention, it would have been obvious to combine Kucera et al. with Carus et al. The motivation would have been to determine a set of tags based on the context of a word, which would improve or enhance the morphological analysis process.

As per **claim 11**, Kucera et al. discloses all of the limitations of claim 10, upon which claim 11 depends. Kucera et al. does not disclose:

identifying a most likely morphological tag to be associated to the given word includes the application of a plurality of contextual rules.

However, as it is well known in the art, Carus et al. teaches using a plurality of contextual rules in morphological disambiguation (C.17.lines 4-6, 15-40-include a plurality of contextual rules). Therefore, at the time of the invention, it would have been obvious to combine Kucera et al. with Carus et al. The motivation for doing so would have been to use a plurality of rules to determine a correct or parse of a sentence.

As per **claim 12**, Kucera et al. and Carus et al. disclose all of the limitations of claim 11, upon which claim 12 depends. Kucera et al. does not disclose:

identifying a most likely tag to be associated to the given word includes the recursive application of contextual rule.

However, as it is well known in the art, Carus et al. teaches of an iterative process that refines the given word on a basis of it's context and rules associated with the context (C.23.lines 61-67, C.24.lines 1-4, Fig 10-the entire code).

Therefore, at the time of the invention, it would have been obvious to combine Kucera et al. with Carus et al. The motivation for doing so would have been to create a record due to the application of contextual rules that refine the analysis through a loop or recursive analysis involving the given word, which would improve the chances in obtaining a correct tag for the given word.

As per **claim 13**, Kucera et al. discloses all of the limitations of claim 8, upon which claim 13 depends. Kucera et al. does not disclose:

the contextual rule is indicative of a data structure associating a certain precursor context in which a word occurs to a data element selected from the set consisting of a morphological tag, an ambiguity class, and a word.

However, as it is well known in the art, Carus et al. teaches However, as it is well known in the art, Carus et al. teaches using several contextual rules (C.17.lines 15-40 list several contextual rules including tags, ambiguous classes, and words/tokens) indicative of the contextual data structure containing a precursor context of a word (C.17.lines 13-14). Therefore, at the time of the invention, it would have been obvious to combine Kucera et al. with Carus et al. The motivation would have been to determine a set of tags based on the context of a word, which would improve or enhance the morphological analysis process.

As per **claim 14**, Kucera et al. discloses all of the limitations of claim 8, upon which claim 14 depends. Kucera et al. does not disclose:

the contextual rule is indicative of a data structure associating a certain successor context in which a word occurs to a data element selected from the set consisting of a morphological tag, an ambiguity class, and a word.

However, as it is well known in the art, Carus et al. teaches using several contextual rules (C.17.lines 15-40 list several contextual rules including tags, ambiguous classes, and words/tokens) indicative of the contextual data structure containing a successor context of a word (C.17.lines 13-14). Therefore, at the time of the invention, it would have been obvious to combine Kucera et al. with Carus et al. The motivation would have been to determine a set of tags based on the context of a word, which would improve or enhance the morphological analysis process.

8. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts in view of Kucera et al.

Roberts and Kucera et al. are analogous are because they both involve information extraction from natural language.

As per **claim 28**, Roberts discloses all of the limitations of claim 26, upon which claim 28 depends. Roberts does not disclose:

the set of semantic rules includes at least one rule based on the capitalization of words in the noun phrase.

However, as it is well known in the art, Kucera et al. teaches generating an appropriate type based on the capitalization of a word (C.13.lines 65, 66). Therefore, at the time of the invention, it would have been obvious to combine Roberts and Kucera. The motivation for doing would to analyze the syntactic and grammatical components of a phrase in order to determine an appropriate semantic type to be associated with the word phrase based on capitalized words,

which would enhance and further refine the semantic type associated to the word.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Even (US Patent No. 6,393,399 filed Sep. 30, 1998) teaches forming compound noun phrases by using several joining rules.
- Zamora (US Patent No. 4,965,763 Oct. 23, 1990) teaches using lexical frames and slots to organize semantic components generated from a parser.
- Carbonell et al. (US Patent No. 5,995,920 Nov. 30, 1999) teaches of semantic organized frame representation of information.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamont M Spooner whose telephone number is 703/305-8661. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Smits can be reached on 703/306-3011. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lms
04/07/04

RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER